What is claimed is:

1. A method of making a medical device, the method comprising:

providing an elongated core member having a first end and a second end, and defining an outer surface;

providing an elongated structure including a first portion and a second expanded portion;

disposing an attachment member about a portion of the elongated core member and the first portion of the elongated structure, the attachment member defining a lumen and having an inner surface, wherein the first portion of the elongated structure is disposed between the inner surface of the attachment member and the outer surface of the elongated core member; and

moving the elongated structure relative to the attachment member the such that the second portion of the elongated structure engages the inner surface of the attachment member and the outer surface the elongated core member to mechanically couple the elongated structure to the elongated core member.

2. The method of claim 1, wherein the elongated structure comprises a ribbon.

3. The method of claim 1, wherein the second expanded portion comprises a portion of the elongated structure that includes at least one size dimension that is greater than the first portion of the elongated structure.

4. The method of claim 3, wherein the second expanded portion includes a width that is greater than a width of the first portion.

5. The method of claim 3, wherein the second expanded portion includes a thickness that is greater than a thickness of the first portion.

6. The method of claim 1, wherein the second expanded portion comprises an additional material added to the elongated structure.

7. The method of claim 6, wherein the additional material comprises a solder, braze, or weld material.

8. The method of claim 6, wherein the additional material comprises a cold welding material.

9. The method of claim 6, wherein the additional material comprises additional material added during the construction of the elongated structure.

10. The method of claim 1, wherein the second expanded portion comprises a widening in the elongated structure.

11. The method of claim 1, wherein the second expanded portion comprises a curve in the elongated structure.

12. The method of claim 1, wherein the second expanded portion comprises a bend in the elongated structure.

13. The method of claim 1, wherein the second expanded portion comprises a twist in the elongated structure.

14. The method of claim 1, wherein the second expanded portion comprises a deformation in the elongated structure.

15. The method of claim 1, wherein the second expanded portion is defined by a change in the dimensions of in the elongated structure.

16. The method of claim 1, wherein the second expanded portion comprises a bifurcation in the elongated structure.

17. The method of claim 1, wherein the medical device is a guidewire, and the core member is a solid core wire.

18. The method of claim 1, further including using an additional attachment technique to connect attachment member to the elongated shaft and the elongated structure.

19. The method of claim 17, wherein the additional attachment technique comprises welding, soldering, brazing, adhesive bonding, crimping, or the use of an expandable alloy.

20. The method of claim 17, wherein the attachment member comprises a shape memory alloy, and using an additional attachment technique comprises using a shape memory effect to connect attachment member to the elongated shaft and the elongated structure.

21. The method of claim 1, wherein the elongated structure comprises a tubular member.

22. The method of claim 1, wherein the attachment member comprises a tubular member.

23. The method of claim 1, wherein the attachment member comprises an annular ring.

24. A method of making a medical device, the method comprising:

providing an elongated core member having a first end and a second end, and defining an outer surface;

providing an elongated structure having a first portion and a second portion, wherein the first portion has a first dimensional size, and the second portion has a second dimensional size that includes at least one size dimension that is greater than the first dimensional size;

disposing an attachment member about a portion of the elongated core member and the first portion of the elongated structure, the attachment member defining a lumen and having an inner surface, wherein the first portion of the elongated structure is disposed between the inner surface of the attachment member and the outer surface of the elongated core wire; and

moving the elongated structure relative to the attachment member the such that the second portion of the elongated structure engages the inner surface of the attachment member and the outer surface the elongated core member to mechanically couple the elongated structure to the elongated core member.

25. A method of making a medical device, the method comprising:

providing an elongated core member having a first end and a second end, and defining an outer surface;

providing an elongated structure including a first portion having a first configuration, and a second portion having a second configuration different from the first configuration;

disposing an attachment member about a portion of the elongated core member and the first portion of the elongated structure, the attachment member defining a lumen and having an inner surface, wherein the first portion of the elongated structure is disposed between the inner surface of the attachment member and the outer surface of the elongated core member; and

moving the elongated structure relative to the attachment member the such that the second portion of the elongated structure engages the inner surface of the attachment member and the outer surface the elongated core member to mechanically couple the elongated structure to the elongated core member.

26. A method of making a medical device, the method comprising:

providing an elongated shaft having a first end and a second end, and defining an outer surface;

providing an elongated member having a length and a longitudinal axis along the length thereof, the elongated member including a first portion defining a first outer perimeter relative to the longitudinal axis, and a second portion defining a second outer perimeter relative to the longitudinal axis, wherein the outer perimeter of the second portion includes at least a part thereof that extends further from the longitudinal axis that any portion of the outer perimeter of the first portion;

disposing an attachment member about a portion of the elongated shaft and the first portion of the elongated member, the attachment member defining a lumen and having an inner surface, wherein the first portion of the elongated member is disposed between the inner surface of the attachment member and the outer surface of the elongated shaft; and

moving the elongated member relative to the attachment member the such that the second portion of the elongated member engages the inner surface of the attachment member and the outer surface the elongated shaft to mechanically couple the elongated member to the elongated shaft.

27. A method of making a medical device, the method comprising:

providing an elongated shaft having a first end and a second end, and defining an outer surface;

providing an elongated structure having a first portion having a first outer perimeter and a second portion having a second outer perimeter different from the first outer perimeter;

disposing an attachment member about a portion of the elongated shaft and the first portion of the elongated structure, the attachment member defining a lumen and having an inner surface, wherein the first portion of the elongated structure is disposed between the inner surface of the attachment member and the outer surface of the elongated shaft; and

moving the elongated structure relative to the attachment member the such that the second portion of the elongated structure engages the inner surface of the attachment member and the outer surface the elongated shaft to mechanically couple the elongated structure to the elongated shaft.

28. A method of making a medical device, the method comprising:

providing an elongated core member having a first end and a second end, and defining an outer surface;

providing an elongated structure including a first portion and a second portion;

providing means for mechanically coupling the elongated structure to the elongated core member; and

coupling the elongated structure to the elongated core member using the coupling means.

29. A medical device comprising:

an elongated core member having a first end and a second end, and defining an outer surface;

an elongated structure including a first portion and a second expanded portion;

an attachment member disposed about a portion of the elongated core member and a part of the first portion of the elongated structure, the attachment member defining a lumen and having an inner surface;

wherein the part of the first portion of the elongated is disposed between the inner surface of the attachment member and the outer surface of the elongated core member; and

wherein a part of the second portion of the elongated structure is in mechanical engagement with the inner surface of the attachment member and the outer surface the elongated core member to provide a mechanical coupling of the elongated structure between the attachment member and the elongated core member.

30. The medical device of claim 29, wherein the elongated structure comprises a ribbon.

31. The medical device of claim 29, wherein the elongated structure comprises a tubular member.

32. The medical device of claim 29, wherein the attachment member comprises a tubular member.

33. The medical device of claim 29, wherein the attachment member comprises an annular ring.

34. The medical device of claim 29, wherein the second expanded portion comprises a portion of the elongated structure that includes at least one size dimension that is greater than the first portion of the elongated structure.

35. The medical device of claim 34, wherein the second expanded portion includes a width or thickness, that is greater than that of the first portion.

36. The medical device of claim 29, wherein the second expanded portion comprises an additional material added to the elongated structure.

37. The medical device of claim 36, wherein the additional material comprises a solder, braze, or weld material.

38. The medical device of claim 36, wherein the additional material comprises a cold welding material.

39. The medical device of claim 36, wherein the additional material comprises additional material added during the construction of the elongated structure.

40. The medical device of claim 29, wherein the second expanded portion comprises a widening in the elongated structure.

41. The medical device of claim 29, wherein the second expanded portion comprises a curve, bend or twist in the elongated structure.

42. The medical device of claim 29, wherein the second expanded portion comprises a deformation in the elongated structure.

43. The medical device of claim 29, wherein the second expanded portion is defined by a change in the dimensions of in the elongated structure.

44. The medical device of claim 29, wherein the second expanded portion comprises a bifurcation in the elongated structure.

45. The medical device of claim 29, wherein the medical device is a guidewire, and the core member is a solid core wire.

46. The medical device of claim 29, further including an additional attachment material connecting the attachment member to the elongated shaft and the elongated structure.

47. The medical device of claim 46, wherein the additional attachment material comprises welding, soldering, brazing, adhesive bonding, or expandable alloy material.

48. The medical device of claim 29, wherein the attachment member comprises a shape memory alloy, and an additional attachment mechanism connecting the attachment member to the elongated shaft and the elongated structure comprises using a shape memory effect to connect attachment member to the elongated shaft and the elongated structure.

49. A medical device comprising:

an elongated core member having a first end and a second end, and defining an outer surface;

an elongated structure having a first portion and a second portion, wherein the first portion has a first dimensional size, and the second portion has a second dimensional size that includes at least one size dimension that is greater than the first dimensional size;

an attachment member disposed about a portion of the elongated core member and a part of the first portion of the elongated structure, the attachment member defining a lumen and having an inner surface;

wherein the part of the first portion of the elongated is disposed between the inner surface of the attachment member and the outer surface of the elongated core member; and

wherein a part of the second portion of the elongated structure is in mechanical engagement with the inner surface of the attachment member and the outer surface the elongated core member to provide a mechanical coupling of the elongated structure between the attachment member and the elongated core member.

50. A medical device comprising:

an elongated core member having a first end and a second end, and defining an outer surface;

an elongated structure including a first portion having a first configuration, and a second portion having a second configuration different from the first configuration;

an attachment member disposed about a portion of the elongated core member and a part of the first portion of the elongated structure, the attachment member defining a lumen and having an inner surface;

wherein the part of the first portion of the elongated is disposed between the inner surface of the attachment member and the outer surface of the elongated core member; and

wherein a part of the second portion of the elongated structure is in mechanical engagement with the inner surface of the attachment member and the outer surface the

elongated core member to provide a mechanical coupling of the elongated structure between the attachment member and the elongated core member.

51. A medical device comprising:

an elongated core member having a first end and a second end, and defining an outer surface;

an elongated member having a length and a longitudinal axis along the length thereof, the elongated member including a first portion defining a first outer perimeter relative to the longitudinal axis, and a second portion defining a second outer perimeter relative to the longitudinal axis, wherein the outer perimeter of the second portion includes at least a part thereof that extends further from the longitudinal axis that any portion of the outer perimeter of the first portion;

an attachment member disposed about a portion of the elongated core member and a part of the first portion of the elongated structure, the attachment member defining a lumen and having an inner surface;

wherein the part of the first portion of the elongated is disposed between the inner surface of the attachment member and the outer surface of the elongated core member; and

wherein a part of the second portion of the elongated structure is in mechanical engagement with the inner surface of the attachment member and the outer surface the elongated core member to provide a mechanical coupling of the elongated structure between the attachment member and the elongated core member.

52. A medical device comprising:

an elongated core member having a first end and a second end, and defining an outer surface;

an elongated structure having a first portion having a first outer perimeter and a second portion having a second outer perimeter different from the first outer perimeter;

an attachment member disposed about a portion of the elongated core member and a part of the first portion of the elongated structure, the attachment member defining a lumen and having an inner surface;

wherein the part of the first portion of the elongated is disposed between the inner surface of the attachment member and the outer surface of the elongated core member; and

wherein a part of the second portion of the elongated structure is in mechanical engagement with the inner surface of the attachment member and the outer surface the elongated core member to provide a mechanical coupling of the elongated structure between the attachment member and the elongated core member.

53. A medical device comprising:

an elongated core member having a first end and a second end, and defining an outer surface;

an elongated structure including a first portion and a second portion; and

means for mechanically coupling the elongated structure to the elongated core member.